

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Martin F. Schlecht

Continuation Application of

Application No.: 10/359,457

Filed: February 5, 2003

For: HIGH EFFICIENCY POWER CONVERTER

Date: 3-29-04

EXPRESS MAIL LABEL NO. EV214952 316 VS

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or  
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or  
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):  
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.  
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☐ Copies of the cited references are enclosed.
- ☐ Since this application was filed after June 30, 2003, copies of issued U.S. patents and published U.S. applications are not required and are not being provided.
- ☒ Copies of the cited references are enclosed except those entered in prior applications, U.S. Application Nos. 10/359,457, 09/821,655, 09/417,867 and 09/012,475, to which priority under 35 U.S.C. 120 is claimed. [The earlier applications contain copies of the cited references.]
- ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) ☐ under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
- ☐ the explanation provided in the Specification.
- ☐ submission of the enclosed International Search Report.
- ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
- ☐ the enclosed English language abstract.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

\_\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

\_\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

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Examiner

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Date

- ☐ A copy of each above-cited application, including the current claims, is enclosed.
- ☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account 08-0380 in the amount of \$[ ]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By

  
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Dated: 3/26/4

PTO-1449 REPRODUCED  <b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  <b>March 26, 2004</b>  (Use several sheets if necessary)	ATTORNEY DOCKET NO. 1465.1001-011		CONT. OF APPLICATION NO. 10/359,457	
	FIRST NAMED INVENTOR Martin F. Schlecht		FILING DATE	
	EXAMINER	CONFIRMATION NO.	GROUP	

U.S. PATENT DOCUMENTS				
EXAM- INER INI- TIAL	REF. NO.	DOCUMENT NUMBER Number-Kind Code (if known)	ISSUE DATE / PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT
	AA	3,663,941	05-16-1972	Pasciutti
	AB	4,788,634	11-29-1988	Schlecht et al.
	AC	5,019,954	05-28-1991	Bourgeault et al.
	AD	5,179,512	01-12-1993	Fisher et al.
	AE	5,274,543	12-28-1993	Loftus, Jr.
	AF	5,303,138	04-12-1994	Rozman
	AG	5,528,482	06-18-1996	Rozman
	AH	5,625,541	04-29-1997	Rozman
	AI	5,726,869	03-10-1998	Yamashita et al.
	AJ	5,774,350	06-30-1998	Notaro et al.
	AK	5,870,299	02-09-1999	Rozman
	AA2	5,872,705	02-16-1999	Loftus, Jr. et al.
	AB2	6,088,329	07-11-2000	Lindberg et al.
	AC2	4,788,450	11-29-1988	Wagner
	AD2	4,812,672	03-14-1989	Cowan et al.
	AE2	5,343,383	08-30-1994	Shinada et al.
	AF2	5,396,412	03-07-1995	Barlage
	AG2	5,621,621	04-15-1997	Lilliestrale
	AH2	5,880,949	03-09-1999	Melhem et al.
	AI2	6,016,258	01-18-2000	Jain et al.
	AJ2	6,046,920	04-04-2000	Cazabat et al.
	AK2	6,066,943	05-23-2000	Hastings et al.

EXAMINER	DATE CONSIDERED
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	FIRST NAMED INVENTOR <b>Martin F. Schlecht</b>		FILING DATE	
	EXAMINER		CONFIRMATION NO.	GROUP

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER Country Code-Number-Kind Code (if known)	DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION YES NO	
	AL	WO 88/09084 A1	11-17-1988	Otis Elevator Company		
	AM	EP 0 549 920 B1	07-07-1993	Alcatel Standard Electrica, S.A.		
	AN	JP 06315263 A	11-08-1994	Nec Corp.	X	
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	AQ4					

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
AR	Casey, Leo Francis, "Circuit Design For 1-10 MHZ DC-DC Conversion," MIT Doctoral Thesis, January 1989, pp 1-216.	
AS	Ferencz, Andrew, "A 250 W High Density Point-of-Load Converter," MIT Master of Science Thesis, September 1989, pp. 1-117.	
AT	Mohandes, Bijan, "MOSFET Synchronous Rectifiers Achieve 90% Efficiency - Part I and Part II, PCIM, June 1991, pp. 10-13 & 55-61.	
AU	Cobos, J.A., et al., "Resonant Reset Forward Topologies for Low Output Voltage On Board Converters," IEEE, 1994, pp 703-708.	
AV	Tabisz, W.A., et al., "A MOSFET Resonant Synchronous Rectifier for High-Frequency DC/DC Converters," Proceedings of the Power Electronics Specialists Conference, San Antonio, TX, June 10-15, 1990, pp 769-779.	
AW	Wiegman, H.L.N., et al., "A Dual Active Bridge SMPS Using Synchronous Rectifiers," HFPC May 1990 Proceedings, pp 336-346.	
AX	Shoyama, Masahito, et al., "Zero-Voltage-Switching Realized by Magnetizing Current of Transformer in Push-Pull Current-Fed DC-DC Converter," IEEE, 1993, pp 178-184.	
AY	Shoyama, Masahito, et al., "Zero-Voltage-Switched Push-Pull DC-DC Converter," IEEE, 1991, pp 223-229.	
AZ	Xiao, Li, et al, "Soft Switched PWM DC/DC Converter With Synchronous Rectifiers," IEEE 1996, pp 476-484.	
AR2	Blanchard, Richard, et al., "The Design of a High Efficiency, Low Voltage Power Supply Using MOSFET Synchronous Rectification and Current Mode Control," IEEE, 1985, pp 355-361.	
AS2	Jitaru, Ionel Dan, et al, "High Efficiency DC-DC Converter," IEEE, 1994, pp. 638-644.	
AT2	Harper, D.J., et al., "Controlled Synchronous Rectifier," HFPC May 1988 Proceedings, pp 165-172.	
AU2	Acker, Brian, et al., "Current-Controlled Synchronous Rectification," IEEE 1994, pp 185-191.	

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	AV2	Murakami, Naoki, et al., "A High-Efficiency 30-W Board Mounted Power Supply Module," IEEE 1991, pp 122-127.
	AW2	Casey, Leo F., et al., "A High Frequency, Low Volume, Point-of-Load Power Supply for Distributed Power Systems," IEEE 1987, pp 439-450.
	AX2	Schlecht, Martin F., "Research Results from the Study of A High Efficiency, Highly Manufacturable DC-DC Converter," unpublished, pp 1-32.
	AY2	Gachora, John Mburu, "Design of a Four-Phase Switchmode High Efficiency Power Supply," MIT Master of Engineering Thesis, 1994, pp 1-66.
	AZ2	Blanchard R., et al., "MOSFETs Move In On Low Voltage Rectification," Official Proceedings of the Ninth International PCI '84 Conference, October 29-31, 1984, pp 213-222
	AR3	Garcia, O. et al., "Zero Voltage Switching In The PWM Half Bridge Topology With Complementary Control And Synchronous Rectification," Record of the Annual Power Electronics Specialist Conference, Pesc, Atlanta, June 12-15, 1995, Vol. 1, No. CONF. 26, June 12, 1995, IEEE, pp 286-291.
	AS3	Mweene, L. Haachitaba, et al., "A High-Efficiency 1.5 kW, 390-50 V Half-Bridge Converter Operated at 100% Duty-Ratio,"IEEE, 1992, pp. 723-730.
	AT3	Mweene, Loveday Haachitaba, "The Design of Front-End DC-DC Converters of Distributed Power Supply Systems with Improved Efficiency and Stability," Thesis, Massachusetts Institute of Technology, September 1992, pp. 1-184.

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